

1 THE UNITED STATES PATENT AND TRADEMARK OFFICE

2 APPLICANT : SIMON J. BROADLEY)
3 SERIAL NO. : 09/478,578)
4 FILED : January 6, 2000)
5 FOR: : SELF-OSCILLATING VARIABLE)
6 FREQUENCY CLOSED LOOP)
7 CLASS D AMPLIFIER)

Ex. K. Nguyen

Group 2817

8 CONTINUING PROSECUTION APPLICATION (CPA)
9 PRELIMINARY AMENDMENT

10 Hon. Commissioner of
11 Patents and Trademarks,
12 Washington, D.C. 20231

13 Dear Sir:

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15 Kindly cancel Claims 1 to 3 and insert new Claims 4 to 6.
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23 I hereby certify that this correspondence is being
24 deposited with the United States Postal Service as
25 EXPRESS MAIL NO. ET 613 018 752 US
26 in an envelope addressed to: HON. COMMISSIONER OF
27 PATENTS AND TRADEMARKS, Washington,
28 D.C. 20231 on November 5, 2001

TOD R. NISSLE, Reg. No. 29,241

November 5, 2001

DATE

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1 The foregoing amendments are reflected in the attached **APPENDIX I:**
2 **Replacements, Deletions, Additions** and **APPENDIX II: Marked up Versions.**

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5 COMMENTS

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7 The new Claims 4 to 6 specify that the amplifier circuit utilizes is a **non-**
8 **inverting, negative feedback** error amplifier circuit as indicated by reference character
9 14 in Fig. 2 of the application. A non-inverting, negative feedback error amplifier circuit
10 does not appear to be utilized in the Higashiyama et al. or Pullen et al (U.S. 6,107,875)
11 references of record.
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14 Respectfully submitted,

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22 Attorney's Docket No. 995-P-3
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APPENDIX I: Replacements, Deletions, Additions

REPLACEMENTS

- I. Title: None.
- II. Specification: None.
- III. Claims: None.
- IV. Abstract: None.

DELETIONS


- I. Title: None.
- II. Specification: None.
- III. Claims

Delete Claims 1 to 3.

- IV. Abstract: None.

ADDITIONS

- I. Title: None.
- II. Specification: None
- III. Claims

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4. A self oscillating audio Class D amplifier, comprising
- (a) a detector for receiving a PVM waveform control signal and producing a digital waveform switching signal to activate one of a pair including a positive switch and a negative switch to correct gain produced by the Class D amplifier;
 - (b) an output stage including a positive switch and a negative switch, said output stage receiving said switching signal and activating one of said switches to produce a digital driving signal;
 - (c) an output filter to receive said digital driving signal, remove switching noise and provide an amplified audio analog output signal to drive a load;
 - (d) a non-inverting, negative feedback error amplifier circuit to
 - (i) receive said amplified analog output signal and compare said output signal to said input signal for gain-correction purposes, and
 - (ii) produce said PVM waveform control signal.
5. A self oscillating audio Class D amplifier, comprising
- (a) a detector for receiving a PVM waveform control signal and producing a digital waveform switching signal to activate one of a pair including a positive switch and a negative switch to correct gain produced by the Class D amplifier;
 - (b) an output stage including a positive switch and a negative switch, said output stage receiving said switching signal and activating one of said switches to produce a digital driving signal;
 - (c) an output filter to receive said digital driving signal, remove switching noise and provide an amplified audio analog output signal to drive a load;
 - (d) a non-inverting, negative feedback error amplifier circuit to
 - (i) receive said amplified analog output signal and compare said output signal to said input signal for gain-correction purposes, and
 - (ii) produce said PVM waveform control signal;

the operation of said amplifier slowing as the magnitude of the error in gain increases.

6. A self oscillating audio Class D amplifier, comprising
- (a) a variable frequency zero crossing detector for receiving a PVM waveform control signal and producing a digital waveform switching signal to activate one of a pair including a positive switch and a negative switch to correct gain produced by the Class D amplifier;
 - (b) an output stage including a positive switch and a negative switch, said output stage receiving said switching signal and activating one of said switches to produce a digital driving signal;
 - (c) an output filter to receive said digital driving signal, remove switching noise and provide an amplified audio analog output signal to drive a load;
 - (d) a non-inverting, negative feedback, error amplifier circuit to
 - (i) receive said amplified analog output signal and compare said output signal to said input signal for gain-correction purposes, and
 - (ii) produce said PVM waveform control signal;

the operation of said amplifier slowing as the magnitude of the error in gain increases.

IV. Abstract: None.

APPENDIX II: Marked Up Versions

Marked Up Versions

I. Title: None.

II. Specification: None.

III. Claims: None.

IV. Abstract: None.